

## RELATED APPLICATIONS

## FIELD OF THE INVENTION

## BACKGROUND OF THE INVENTION

The current practice is to have a bridal registry or baby registry in a single store. Multiple stores in a shopping mall may each have their own registries. This requires the registrants to go through the registration process at each store where they wish to register. Additionally, potential purchasers must follow the current practice of entering certain information regarding the registrant via the interactive touch screen at each store where the registrant is registered. This then requires the potential purchasers to have to wait in line to operate the registry and get printouts at each of the multiple stores.

While this kind of self-service gift registry system has met with tremendous acceptance in the marketplace, there is a continued need for a multi-merchant registry that allows registrants to register for goods from a multitude of merchants.

The present invention provides a system for registering items selected by a registrant from a plurality of participating merchants for subsequent communication to a prospective purchaser. The system has a computer system that

contains identifying information about the registrant. A portable input and storage device is provided that can be carried by the registrant into a plurality of participating stores. The portable input and storage device is capable of receiving and storing information regarding gifts that the registrant desires to receive as presents. The input and storage device stores a unique identifier for the particular merchant each desired gift is from. A transfer device is provided connected to the computer system that receives the information regarding the registrant's desired gifts from the portable input and storage device and transfers the information to the computer system. Finally, a prospective purchaser interface device is provided that allows the prospective purchaser to view, sort or print a list of the gifts desired by the registrant and which particular merchant those gifts are from.

#### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram representative of registry apparatus in accordance with the present invention;

FIG. 2 is a block diagram representative of an alternate embodiment of registry apparatus in accordance with the present invention;

FIG. 3 is a block diagram representative of a second alternate embodiment of registry apparatus in accordance with the present invention;

FIG. 4 is a block diagram representative of a registry network system in accordance with the present invention;

FIG. 5 is a flow chart representation of the steps taken by a registrant user of the registry apparatus in accordance with the present invention;

FIG. 6 is a flow chart representation similar to FIG. 5 of an alternate embodiment of the steps which may be taken by a registrant user;

FIG. 7 is a flow chart representation of the steps taken by a purchaser user of the registry apparatus in accordance with the present invention;

FIG. 8 is a flow chart representation of an alternate embodiment of the steps which may be taken by a purchaser user;

FIG. 9 is an illustration of a representative printout for a purchaser user;

FIGS. 10A-G are a series of illustrations representing screen images that are displayed to a registrant user or a purchaser user;

FIG. 11 is a perspective view of a kiosk housing usable in accordance with the present invention; and

FIGS. 12A-B are a flow chart representation of steps taken by a registrant to obtain a portable bar code scanner from a housing like that shown in FIG. 11 and return it.

FIG. 13 is a top plan view of a shopping mall having a gift registry apparatus according to the present invention.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A gift registry apparatus will be described below. The apparatus will be described with specific reference to a wedding gift registry but it should be understood that it is equally applicable to a baby gift registry or birthday gift registry. Additionally, like elements in the figures are correspondingly identified with primed numerals.

At this time a general overview description of the preferred embodiment of the present invention will be given. This will be followed by a background description of a gift

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## OVERVIEW OF PRESENT INVENTION

The input and storage device stores a unique identifier for the particular merchant for each desired gift, as well as a unique identifier for the gift itself. The unique identifiers are preferably in the form of a bar code that is scanned in by the registrant for each merchant and each gift. A transfer device is provided connected to the computer system for receiving and transferring the information from the portable input and storage device regarding the registrant's desired gifts and the particular merchant those gifts are from. Finally, a prospective purchaser interface device is provided that allows the prospective purchaser to view a list of the gifts desired by the registrant and which particular merchant those gifts are from.

A gift registry apparatus is designated generally by the numeral 20 in FIG. 1. Apparatus 20 is illustrated to include computer mechanism 22 and bar code scanning mechanism 24 for obtaining Universal Product Code (UPC) information about possible gift items. The UPC information allows the computer mechanism to categorize products or, in this case, potential gift items, so that a gift buyer can have the option of obtaining a list of gifts of a particular category.

The scanning mechanism 24 includes not only the bar code reading feature, but also a mechanism for transferring the information to computer mechanism 22. Bar code scanning mechanism 24 includes a bar code scanner 40 and may include a holder 44 with a locking mechanism 46 which unlocks only when a card reader 36 has appropriately read a magnetically encoded card, such as a credit card. Holder 44 may include a transfer device 45 which reads the memory of bar code scanning mechanism 24 for communication to a computer 26. The various electrical connections and locking/unlocking mechanism for use with the bar code scanning mechanism are conventional.

It is noted that scanning mechanism 24 is a key feature of an arrangement which may also include a card reader 36

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includes a keyboard 210 and an LCD screen 212. The keyboard can be used to enter the identification number or an equivalent UPC number of a bar code which does not scan. The keyboard can also be used to enter purchase information after a purchaser makes a purchase. As indicated, the LCD screen is available for immediate verification that the correct bar code was scanned with respect to the item desired. An acceptable portable bar code scanner for this apparatus is Symbol Model LDT 3805. The particularly novel characteristic of apparatus 200 is that it allows the gift registry system to be a complete self-service system up to the point of purchase of a gift by the second user or gift buyer.

With respect to the gift registrant taking the portable bar code scanner to browse the store, a preferred form of security is that the registrant would provide a credit card to opening 202 to be read. Credit on the credit card account would be checked and a predetermined sum, for example \$200, would be debited to the account before releasing the scanner. When the account was verified, credit found to be available, and the debit made, door 206 would either automatically open or, at least, would unlock and a prompt would appear on the monitor for the registrant to open the door and take the scanner. When door 206 was sensed to be open, another prompt could appear on the monitor for the registrant to take the bar code scanner 40. When it was sensed that the bar code scanner was no longer present, door 206 would automatically close and lock or the registrant would be prompted to close the door. After the registrant had completed use of the scanner 40, either an appropriate indication would be made on a menu at monitor 30 or the credit card could once again be inserted and read, whereupon appropriate menus would instruct the registrant to open door 206 and place scanner 40 properly on the charging stand and transfer device 45. The physical presence of scanner 40 would be sensed. An appropriate communication would be made between the terminal computer or the central processing computer and the scanner to verify that it was placed properly. Door 206 would then automatically close or a prompt would be given for the registrant to close the door. When the door was sensed to be closed, the credit card account would be credited an equal amount as the earlier debit, and the registrant would be informed of such action and thanked for registering gifts in the registry.

Alternatively, the portable bar code scanner is in the possession of the retail store. In this case, when a registrant wishes to register gifts in the registry apparatus, a store clerk requires, for example, cash, a credit card, driver's license, or something equivalent as security for giving the bar code scanner to the registrant user.

After the user has initiated apparatus 20 by entering first information on themselves in the computer, they walk around the store with the bar code scanner. Second information obtained from the bar codes scanned on the desired items, is communicated to the computer. In this regard, as shown in FIG. 2, bar code scanner 40' with memory/storage preferably includes a transmitter 52 which through radio, infrared, or other electromagnetic frequencies sends encoded information to receiver 54 for downloading to computer 26'. Other elements of apparatus 20' are similar to those of apparatus 20, for example, printer 34', monitor 30' and touch screen 32'. Alternatively, the communication mechanism could be removable storage media 42, for example, a commonly known floppy disk, which could be removed from the scanner and inserted in retrieving mechanism 48 in the computer, such as the usual floppy disk receiving slot and related mechanism.

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A further alternative is shown in FIG. 3. Bar code scanner 40" includes a modem 56 or is connected to a modem as part of a transfer device (like 45). Modem 56, in a conventional fashion, connects through a public telephone channel to modem 37" of computer 26". Apparatus 20" is also likely to include some or all of the other elements of apparatus 20, such as printer 34", monitor 30", and touch screen 32".

Apparatus 20" is an interesting embodiment in that conceivably bar code scanner 40" could be located in the first user's home. Appropriate first information on the user could be entered into computer 26" in various ways, such as through a home personal computer with a modem connection to the store computer, by orally giving the first information over the telephone to a person entering it into the store computer 26", or by the first user entering the first information into computer 26" when the first user registrant is visiting the store. In any case, the store could send a catalog to perspective users. The catalog, as well as showing various items available, could include bar codes for those items. In that way, the bar code scanner could be used to scan bar codes of interest in order to enter appropriate second information as indicated via apparatus 20". The second information would be sent to computer 26" via the connection which can be made between the modems. Likewise, a shopper second user could select a gift from the catalog and communicate appropriate information, including the second information obtained from scanning the bar code, via the connection between the modems. In the usual way that business is conducted with respect to catalog sales, the gift item would be sent to the shopper second user.

In the preferred of these various embodiments, with reference to FIG. 1, computer 26 is an IBM PC or compatible computer with at least 2 megabytes of dynamic memory. Monitor 12 is a standard Super VGA Monitor capable of displaying 640x480 pixels at 256 colors per pixel. Touch screen 14 is an Elographics Intellitouch model 4001 Surface Acoustic Wave Touch Screen with Touch Screen Controller. Card reader 16 is a Magtek Swipe M%211232 magnetic card reader connected to computer 26 through an RS232 line. Laser printer 36 is a Canon LBP4 laser printer. Modem 42 is a 9600 Baud Multitec 10 Model MT 1432 error correcting modem. Bar code scanner 40 is a Symbol model 3805.

Holder 44 functioning as a transfer device is a Symbol CBM 38bb Cradle Base Module. In the embodiment of FIG. 2, transmitter 52 is a Symbol model LRT3805, while receiver 54 is a Symbol Spectrum 1 radio frequency network. All these items are commercially available as is known to those skilled in the art.

Gift registry apparatus 20 operates independently as shown in FIGS. 1-3, or within a network as shown in FIG. 4. Network 58 provides for numerous apparatuses 20 depicted in the form of branch computers 60 with bar code scanners 62. Apparatuses 20.1 through 20.N are connected as known to those skilled in the art through public telecommunications channel 64 to a central processing computer 66. Alternatively, they could be connected to central processing computer through a Local Area Network (LAN) or Wide Area Network (WAN). Central processing computer 66 is connected to a printer 68 for printing various transactions, as desired. In a preferred embodiment, central processing computer 66 could be a PC compatible computer and printer 68 is a laser printer of the type indicated hereinbefore. With a network 58, the registrant first user can input first and second information in any of the fashions indicated with respect to any of the terminal computer mechanisms 20.1 to 20.N. The association of the first and second information can take place in a particular computer mechanism 20.N or it can take place

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The flow charts of FIGS. 12A and 12B depict an alternative to the store providing the bar code scanner to the registrant (see also FIG. 11). Just as indicated at box 72 in FIG. 5, the first step, as indicated at box 214 is for the registrant to enter first information about themselves. As indicated at box 216, the first information is received by apparatus 20 and a prompt given for the registrant to supply a credit card or other appropriate unlocking mechanism. At box 218, the registrant passes the magnetic card through the card reader. At box 220, the account represented in the information read from the card is validated and, assuming that there is credit available, a hold is placed against a predetermined amount of credit as security for the bar code reader. In the preferred embodiment, as indicated at box 222, the unique identification number is transmitted to the bar

The flow chart depicted in FIG. 12B relates to the registrant returning the bar code scanner and having a credit card account. As indicated at box 236, registrant first identifies or registers a desire to return the scanner. At box 238, the door 206 of compartment 204 is unlocked and the registrant is prompted to open the door and return scanner. Depending on the construction of housing 200, door 206 may automatically open and close as appropriate or there may be prompts for the registrant to physically open and close the door. At box 240, registrant replaces the scanner. At box 242, replacement of the scanner is sensed and apparatus 20 makes a communication with the scanner to insure that it has been properly placed for recharging and downloading of second information. The door is either automatically closed or a prompt is given to the registrant to close the door. At box 244, the hold that was placed against the credit card account is removed. At box 246, the registrant is thanked and monitor 30 reverts to the welcome screen. At box 248, apparatus 20 downloads the second information from the scanner to the appropriate computer for association with other accumulated information regarding that registrant. The flow chart of FIG. 12B corresponds with the inclusive boxes of 82-86 in FIG. 5. The subsequent portion of FIG. 5 is still appropriate. In that regard, rather than the monitor reverting to the welcome screen, it may allow the registrant to review the accumulated information for any changes. Based on the indicated method of FIGS. 12A and 12B, the computer terminal is programmed appropriately and present screens such as those shown in FIGS. 10F and 10G.

The procedure discussed thus far is sufficient for a useful gift registry system. With references to FIGS. 7 and 8, a gift buyer could now approach the system and obtain desired information as indicated in the flow charts of FIGS. 7 and 8. Nevertheless, there are further advantageous steps available. It is desirable, as indicated at box 90 of FIG. 5, that the registrant reviews the associated first and second information for correctness. If there is incorrect information or if the registrant wishes to delete certain information or enter new information, the apparatus may be again accessed by using the identification number and password and making appropriate changes. After the review and any changes have been made, the gift registry apparatus receives an indication from the registrant that the review has been made and completed. As indicated at box 92, it is then possible to optionally reward the registrant for taking the time and trouble to provide all this information to the gift registry apparatus of a particular store. The apparatus can be made capable to provide the reward to the registrant in the form of a store gift certificate, which may be pre-printed, or credit for a more general gift certificate selection as disclosed in U.S. Pat. No. 5,243,174. As indicated at box 94, the registrant receives the gift certificate and can thereafter redeem it in a usual fashion.



As with the procedure of FIG. 5, as indicated at box 90', it is also desirable to have the registrant review the associated first and second information, and perhaps price information. As indicated at box 92', the gift registry apparatus receives the review indication and prints or otherwise dispenses a gift certificate. As indicated at box 94', the registrant receives the gift certificate. In a somewhat different procedure than indicated with respect to FIG. 5, as indicated at box 106, the registrant could after receiving the gift certificate provide any changes to the first and second information so that as indicated at box 108, the gift registry apparatus would at that time receive the changes.

The procedure for using the gift registry apparatus which is followed by potential gift buyers is shown in FIGS. 7 and 8. With reference to FIG. 7, a gift buyer first approaches the gift registry apparatus, and as indicated at box 110, identifies the registrant. Identifying the registrant may be done using encoded registry cards, as disclosed in Applicant's co-pending application entitled "A Method and Apparatus for Providing Registry Cards", the disclosure of which has been incorporated herein by reference, or through a touch screen menu system as described above. There can be further verification steps, such as also identifying the wedding date or the future spouse's name. As indicated at box 112, the gift registry apparatus provides access to the gift buyer so that the gift buyer can obtain associated first and

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Alternatively, the third information can be transmitted by radio frequency as discussed hereinbefore directly from the bar code scanner to the computer terminal and immediately associated with the first and second information. Such procedure is indicated by the solid arrow 134 extending from box 124 to box 130.

Gift registry apparatus 20 is programmed as known to those skilled in the art based on the representative screens of FIGS. 10A-G. Particular branch computers 60 (see FIG. 4) use a DOS operating system, are programmed with C++ program language, and make use of dBase database or SQL files for data storage. The central processing computer 66 uses an OS/2 operating system.

With reference to FIGS. 10A-G, as indicated at box 136, the first screen of the program welcomes a user to the "XYZ Gift Registry". The user is given the option of accessing the "registry" or proceeding with "registration". The instruction is given to touch one of the regions indicated.

Most screens include an option for the user to request "help" and will not be further discussed.

If the user touches "registration", then the screen represented by box 138 appears. The registrant user is given the opportunity to select between the options of "new registration", "update previous registration", "release bar code scanner", or "return bar code scanner".

Beginning with box 138, most screens in addition include the option of touching a region entitled "previous screen", which if touched, would result in the previous screen appearing so that the user could then proceed in accordance with the previous screen. Since this option is also available on most screens except the final processing and thank-you screens, it also will not be any further discussed.

If "new registration" is touched, control proceeds to screen 140. Screen 140 provides the registrant user the option of providing information relating to "wedding date", "bride's name", or "groom's name". If the bride's name or the groom's name is selected, control proceeds to the screen represented by box 142. It is understood that box 142 is representative with respect to different screens for the groom and for the bride as appropriate. In any case, the registrant user now has the option to provide information relating to name, address, city, state, zip code, day time phone and evening phone. When all the information has been provided, there is the additional option of touching the region identified by the word "done". In that way, control can proceed after all information is entered back to box 140. Depending on the item of information to be provided, control proceeds from box 142 to box 144 so that the appropriate information can be entered. The information to be entered is identified in the space marked "variable". As information is entered by depressing either numbers or letters, the appropriate information appears following the colon after the variable information. There may also be space and erase or backspace options. When all the information for the particular variable has been entered, the registrant user touches "done" and control returns to box 142. After the bride's name and the groom's name information has been entered or if the wedding date option is selected, control proceeds as indicated by a bubble "B" to box 146 shown in FIG. 10B. Again, the registrant user is presented with options for providing information, such as, wedding date, location, city, state, shower date number 1, and shower date number 2. Depending on the option selected, control either proceeds to box 148 or to box 144 as indicated by bubble "C". If control proceeds to box 144, then on the touching of "done", control will return to box 146. Assuming control proceeds to box 148,

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If the registrant at the screen represented by box 138 touches "update previous registration", then control proceeds as shown by bubble "E" to the screen represented by box 172 in FIG. 10E. Screen 172 requests the registrant's number and password and provides appropriate regions in which to touch letters or numbers until the entire registrant number and password is shown following the colon. At that point, the registrant touches "done" and, if the number and password are correct, control proceeds to the screen represented by box 174. If either is incorrect, a screen could appear which tells the user that the number or password is incorrect and that the user will be given another chance to enter them. At that point, screen 172 would reappear. If the incorrect number or password were entered again, control would revert to the welcome screen of box 136.

At box 176, the registrant is given the option to "delete gift" or "change quantity of gift". Regardless of which option is selected, control proceeds to the screen of box 178 where the appropriate gift number is entered. On completion of entry, "done" is touched. If the option was to delete the gift, control would then revert to box 174. If the option was to change quantity of gift, then control proceeds to the



In a case when a registrant has the capability of taking the bar code scanner from a kiosk housing, the registrant is greeted as indicated by the welcome screen 136. The registrant presses registration and screen 138 appears. If it is a new registration, the new registration portion of screen 138 is pressed and the various screens relating to registering as earlier described appear. Similarly, a registrant can update a previous registration. Of interest at the moment, is the self-service feature which allows the registrant to take the portable bar code scanner. With this in mind, the registrant presses "release bar code scanner". As indicated by the circle "F", the next screen is represented at box 250 in FIG. 10F. Screen 250 prompts the registrant to insert a credit card. It indicates that a debit will be placed against the credit card account as security for the scanner, but that a credit will be given when the scanner is returned. After that is done, at box 252, a screen is indicated to instruct the registrant to open the door and remove the scanner. At box 254, the registrant is instructed to closed the door and touch a key to acknowledge. At box 256, the monitor can provide whatever instructions are appropriate. The present screen simply indicates to the registrant that she/he/they are now free to scan bar codes of items which they wish to receive as gifts. They are given the further instruction on how to return the scanner and receive credit. As indicated with the circle "A", control then reverts to the welcome screen 136.

It is understood that the various screens presented are representative and that more or less information may be provided. It is further understood that fewer or more options may be made available to the user in accordance with the previously disclosed procedures to provide the full capability contemplated by the system.

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The present invention is illustrated schematically in FIG. 13. FIG. 13 is a top plan view of a shopping mall having a gift registry kiosk 200 situated centrally. The gift registry kiosk 200 is of the type previously described with reference to FIGS. 1-12. Accordingly, the same figures and element numbers will be used for the description of the present invention. In the preferred embodiment of the present invention, the specific components used are commercially available and are known to those skilled in the art. Examples of the specific components have been previously identified above. In addition to the description of the specific components previously described, other alternative arrangements

Each of the merchants which are participating in the gift registry system are identified by a reference number, as illustrated in FIG. 13. Preferably these merchants would identify themselves with identification signs in the windows of their stores, if they have stores, and also by identification signs on the kiosk 200 itself. Identification signs for each merchant may be placed, for instance, in signage area 301, as illustrated in FIG. 11.

Bar code scanner 40, as previously described, is portable. This allows the registrant to carry scanner 40 from store to store. As the registrant enters a participating store, scanner 40 identifies which particular store the registrant is in by a unique store identifier code. This may be done by scanning in a bar code that is on the doorway of each participating store with scanner 40, it may be done by manually entering a code number for each store via key board 210 or it may be done remotely. For instance, each scanner may have a small receiver (not shown) inside it. As a registrant enters each participating store he typically walk through a security system. This security system may be set up to transmit an identifying signal each time someone walks through the door. This identifying signal may be received by the receiver in scanner 40 and recorded. By recording a unique store identifier, the gift registry system will know which gifts come from which store.

As previously stated with respect to the gift registry apparatus described above, bar code scanner 40 could be located in a registrant's home such that the registrant could register for items from multiple merchants via a catalogue that includes bar codes for the items. The registrant would